# High-Growth INDUSTRY PROFILE

I ndustry Snapshot

Growth Pattern

(Source: U.S. Bureau of Labor Statistics)

- The Information Technology (IT) industry includes such products and services as software products, telecommunications services, wireless services, Internet services, telecommunications equipment, computer hardware, computer peripherals, and computer and data services.

- Eight of the top ten fastest growing occupations are projected to be IT-related.

- Although there are currently regional surpluses of IT workers and the industry is experiencing a contraction, the industry as a whole will require over a million new workers by 2010.

- It is projected that the area of Computer and Data Processing Services will be the fastest growing area in the economy, with employment expected to increase 86% between 2000 and 2010.

economic development

employment

education

Power of e ^{3}
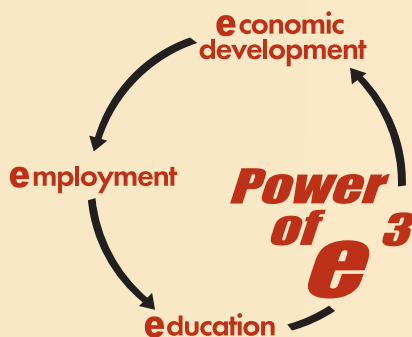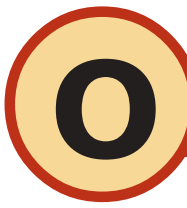
Occupational Outlook

According to the Information Technology Association of America, 92% of all IT workers are in non-information technology companies—80% of which are in small companies outside the IT industry. (Source: U.S. Bureau of Labor Statistics)

IT-Related Occupations	2000 - 2010 % Projected Growth	Median Annual Earnings	Postsecondary Education & Training
Computer software engineers, applications	100.0%	$67,670	Bachelor's degree
Computer support specialists	97.0%	$36,460	Associate degree
Computer software engineers, systems software	89.7%	$69,530	Bachelor's degree
Network and computer systems administrators	81.9%	$51,280	Bachelor's degree
Database administrators	65.9%	$51,990	Bachelor's degree
Computer systems analysts	59.7%	$59,330	Bachelor's degree

Computer Programming, Data Processing, and Other Computer-Related Services Total Employment & Top 10 Occupations, 2001		
Occupation Title	Total Employment	% of Total
Total IT industry	1,987,460	100.0
Computer programmers	207,680	10.45
Computer software engineers, applications	183,620	9.24
Computer support specialists	146,940	7.39
Computer systems analysts	144,330	7.26
Computer software engineers, systems software	104,130	5.24
Customer service representatives	73,230	3.68
Computer and information systems managers	60,660	3.05
Network and computer systems administrators	58,800	2.96
General and operations managers	48,080	2.42
Data entry keyers	42,540	2.14

This is not a comprehensive list of occupations. Please refer to the U.S. Bureau of Labor Statistics at www.bls.gov/oco/cg/cgs033.htm for more information technology occupational information.

Types of Jobs Created

Part-time vs. Full-time:

- Of the 3,117,000 IT professionals, 2,942,000 (94.4%) work full-time, while 175,000 (5.6%) work part-time. (Source: U.S. Bureau of Labor Statistics, Current Population Survey, 2002)

Skill Sets:
(Source: U.S. Bureau of Labor Statistics)

- For all IT-related occupations, technical or professional certifications are growing more popular and increasingly important. As of August 2002, there were almost 100 vendors and organizations offering 670 separate IT certifications.

- IT workers must continually update and acquire new skills to remain qualified in this dynamic field. Completion of vocational training also is an asset. According to a May 2000 report by the Urban Institute, community colleges play a critical role in training new workers and in retraining both veteran workers and those from other fields.

- Computer operators usually receive on-the-job training in order to become acquainted with their employer's equipment and routines but may need some postsecondary education. Some computer operator positions may require an associate degree or even a bachelor's degree. More commonly, however, a high school diploma, previous experience with an operating system, and familiarity with the latest technologies are the minimum requirements.

- Persons interested in becoming computer support specialists generally need only an associate degree in a computer-related field, as well as significant hands-on experience with computers. They also must possess strong problem-solving and analytical skills as well as excellent communication skills because troubleshooting and helping others are such vital parts of the job. And because there is constant interaction on the job with other computer personnel, customers, and employees, computer support specialists must be able to communicate effectively on paper, using e-mail, and in person. They also must possess strong writing skills when preparing manuals for employees and customers.

Workforce Issues

The overarching workforce issues are retention, recruitment, education, and training. The following workforce issues have been gathered by the United States Technology Administration:

- IT jobs are varied, complex, and specialized, as are the knowledge, skills, and experience required to perform them. However, employers prefer job candidates with an exact skill fit, often coupled with a college degree, soft skills, experience, and business or industry knowledge. Because the mix of required knowledge and skills can vary significantly from one IT job to another in terms of formal education, specific technical skills needed, industry knowledge, and experience, IT workers who qualify for one job often do not qualify for another.

- Because IT skill sets are so closely linked to constantly changing software and hardware technologies, the highly specialized and fragmented nature of IT labor demand makes it difficult to link IT education and training programs to employer needs. Specific technical skills often lose value over time, sometimes in as little as two to three years, so IT workers must acquire new skills frequently in order to maintain their labor market viability and upward mobility.

What is the High-Growth Job Training Initiative?

The High-Growth Job Training Initiative is a strategic effort to improve the public workforce system's responsiveness to the needs of the labor market so that the workforce investment system can become demand-driven.

The Initiative is specifically designed to build collaborations among employers, industry leaders, business associations, educators, trainers, the community and technical college system, and the public workforce system.

The purpose of these partnerships is to support models that operationally demonstrate how a demand-driven workforce system can more efficiently serve the workforce needs of business while also effectively help workers find good jobs at good wages.

High-Growth Job Training Initiative

In our efforts to meet the workforce demands of the 21st century economy, the U.S. Department of Labor's Employment and Training Administration (ETA) is conducting forums with various targeted high-growth industries. The Executive Forums are opportunities for senior executives and human capital experts to communicate the critical workforce issues facing their industry.

Next Steps

ETA is addressing the workforce issues of the IT industry from a national perspective by conducting Executive Forums with different sectors of the IT industry to gather relevant information from informed groups in a disciplined manner.

These forums will provide ETA and the public workforce system with the opportunity to gain further understanding of the overall critical workforce needs of the industry. After meeting with industry leaders, ETA will develop and solidify strategic alliances with business, education, and workforce leaders who are proactively focused on the workforce issues confronting the IT industry and engage them in developing innovative approaches to addressing their needs.

ETA is partnering with employers and education providers to develop and model skills training solutions nationally that can be replicated and sustained throughout the state and local public workforce system. These approaches will help ensure that workers have the right skills for the right jobs at the right time.

The ETA In Action

Computing Technology Industry Association (CompTIA)
National Information Technology Apprenticeship System (NITAS)

Challenge

IT remains a critical aspect of work in all industries and sectors, as well as an industry in its own right. However, America continues to suffer from a shortage of qualified IT workers with flexible and portable skills who can readily adapt and respond to ever-changing IT demands and processes.

Addressing the Challenge

ETA's $2,818,795 grant to CompTIA is matched by $3,795,072 in cash and in-kind support from CompTIA and its industry partners. CompTIA is using this funding to support the development and implementation of NITAS, a competency-based apprenticeship methodology that supports consistent and flexible credentialing for the career development and advancement of IT workers. The seven-track NITAS career matrix allows workers to progress through all or part of the apprenticeship program using a combination of classroom instruction and on-the-job training. Standardized, industry-recognized certifications are earned as each apprenticeship tier is completed, and the certifications, which assure worker quality and achievement, are transferable from employer to employer.

Sustainable Impact

NITAS provides the public workforce system with a demand-driven, comprehensive, flexible, and sustainable IT skills development model. This innovative apprenticeship model enables the public workforce system to build its capacity and better leverage its resources to meet the current and anticipated needs of IT employers, ensure a continuing pipeline of skilled IT workers, and contribute to community economic growth. NITAS' consistent focus on increasing the available pool of skilled IT workers and simultaneous attention to retention and advancement of current IT workers demonstrates a continuous workforce planning strategy that ensures sustainability.

National Programs

Additional Resources

Apprenticeship

There are currently 163 apprentices in five IT programs, including Office Systems Technology, IT Generalist, and IT Technical Support Specialist.

Job Corps

Job Corps provides training in 66 IT-related programs, including Network Cable Installer, Computer Service Technician, and Computer Networking, at 44 of its 118 centers. In Program Year 2001, Job Corps graduated 1,189 students from IT vocations.

Online Tools

Career One-Stop
(www.CareerOneStop.org)
The Career One-Stop is a resource for businesses and job seekers. It contains links to America's Job Bank, America's Service Locator, and America's Career InfoNet.

www.careervoyages.gov
www.doleta.gov
www.high-growth.org
www.onetcenter.org

Other Tools

Toll-Free Help Line
1-877-US2-JOBS (1-877-872-5627)
1-877-889-5627 (TTY)
The Toll-Free Help Line provides up-to-date information about the full range of workforce services for workers and businesses as well as answers to employment and training questions.

Contact the BRG

For more information on the activities and services of the ETA's Business Relations Group (BRG), please contact:

U.S. Department of Labor
Employment and Training
Administration
Business Relations Group
200 Constitution Ave., NW
Room N-4643
Washington, DC 20210
(202) 693-3949
businessrelations@dol.gov